

IN THE CLAIMS:

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A fishing reel comprising:

side walls;

a spool shaft rotatably supported between the side walls;

a spool supported on the spool shaft for holding fishing line;

a handle shaft;

a driving gear on the handle shaft;

a pinion on the spool shaft for selectively engaging the driving gear for winding in the fishing line upon the spool;

and a level wind, the level wind comprising a multipart-part transverse shaft rotatably secured between the side walls in front of the spool, the transverse shaft having a longitudinal axis and being adapted to be rotated about its axis by the driving gear, the transverse shaft being formed with a single continuous helical groove along the length thereof extending approximately 180° about the shaft in a first direction and then approximately 180° about the shaft in an opposite direction, and a line guide comprising a block mounted to the transverse shaft and having a pawl for engaging the continuous groove and an eyelet through which the fishing line is threaded;

whereby the line guide oscillates back and forth in front of the spool upon rotation of the transverse shaft by the driving gear so that when fishing line is reeled in it is wound evenly along the length of the spool.

2. The fishing reel of claim 1 wherein the transverse shaft further comprises:

a sub-shaft having opposed ends which are adapted to be rotatably mounted to the side walls of the fishing reel; and

first and second cylindrical sleeves adapted to be carried by the sub-shaft for rotation therewith, each sleeve terminating at one end thereof in an helically-shaped lip, so that when the sleeves are carried by the sub-shaft, the lips of the sleeves define the continuous helical groove.

3. The fishing reel of claim 2 wherein each sleeve further comprises an inner cylindrical portion, the inner cylindrical portion protruding partially through the lip and terminating in a planar face.

4. The fishing reel of claim 2 wherein the transverse shaft further comprises an intermediate sleeve mounted to the sub-shaft for rotation therewith, the intermediate, first, and second sleeves being formed with mating members that interconnect the intermediate, first, and second sleeves.

5. The fishing reel of claim 3 wherein the planar faces of the inner cylindrical portion define mating members that interconnect the first and second sleeve members.

6. The fishing reel of claim 5 wherein the mating members comprise a key and keyway.

7. The fishing reel of claim 5 wherein the mating members comprise a peg and hole.

8. The fishing reel of claim 3 wherein the planar faces of the inner cylindrical portion are disposed perpendicularly to the longitudinal axis of the sub-shaft.

9. The fishing reel of claim 3 wherein the planar faces of the inner cylindrical portion are disposed obliquely with respect to the longitudinal axis of the sub-shaft.

10. The fishing reel of claim 3 wherein the sub-shaft is formed integrally with the first and second sleeve members.

11. The fishing reel of claim 3 wherein the planar faces of the inner cylindrical portion of the sleeve members are secured to each other by an adhesive.

12. A level wind for use with a fishing reel having side walls, a spool supported upon a spool shaft between the two side walls, and a handle shaft having a driving gear associated therewith, the level wind comprising;

a multipart-part transverse shaft rotatably secured between the side walls in front of the spool, the transverse shaft having a longitudinal axis and being adapted to be rotated about its axis by the driving gear, the transverse shaft being formed with a single continuous helical groove along the length thereof extending approximately 180° about the shaft in a first direction and then approximately 180°

about the shaft in an opposite direction and a line guide comprising a block mounted to the transverse shaft and having a pawl for engaging the continuous groove and an eyelet through which the fishing line is threaded;

whereby the line guide oscillates back and forth in front of the spool upon rotation of the transverse shaft by the driving gear.

13. The level wind for use with a fishing reel of claim 12 wherein the transverse shaft further comprises:

a sub-shaft having opposed ends which are adapted to be rotatably mounted to the side walls of the fishing reel; and

first and second cylindrical sleeves adapted to be carried by the sub-shaft for rotation therewith, each sleeve terminating at one end thereof in an helically-shaped lip, so that when the sleeves are carried by the sub-shaft, the lips of the sleeves define the continuous helical groove.

14. The level wind for use with a fishing reel of claim 13 wherein each sleeve further comprises an inner cylindrical portion, the inner cylindrical portion protruding partially through the lip and terminating in a planar face.

15. The level wind for use with a fishing reel of claim 13 wherein the transverse shaft further comprises an intermediate sleeve mounted to the sub-shaft for rotation therewith, the intermediate, first, and second sleeves being formed with mating members that interconnect the intermediate, first, and second sleeves.

16. The level wind for use with a fishing reel of claim 14 wherein the planar faces of the inner cylindrical portion define mating members that interconnect the first and second sleeve members.

17. The level wind for use with a fishing reel of claim 16 wherein the mating members comprise a key and keyway.

18. The level wind for use with a fishing reel of claim 16 wherein the mating members comprise a peg and hole.

19. The level wind for use with a fishing reel of claim 14 wherein the planar faces of the inner cylindrical portion are disposed perpendicularly to the longitudinal axis of the sub-shaft.

20. The level wind for use with a fishing reel of claim 14 wherein the planar faces of the inner cylindrical portion are disposed obliquely with respect to the longitudinal axis of the sub-shaft.

21. The level wind for use with a fishing reel of claim 14 wherein the sub-shaft is formed integrally with the first and second sleeve members.

22. The level wind for use with a fishing reel of claim 14 wherein the planar faces of the inner cylindrical portion of the sleeve members are secured to each other by an adhesive.

23. The fishing reel of claim 3 wherein the sleeve members are maintained in position on the sub-shaft by retaining rings.

24. The level wind for use with a fishing reel of claim 14 wherein the sleeve members are maintained in position on the sub-shaft by retaining rings.